



U.S. Environmental Protection Agency Great Lakes National Program Office Significant Activities Report

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What's a Cleanup Worth?



Waukegan Harbor, Illinois in background
With Waukegan Harbor Marina in foreground

The costs of cleaning up contaminated sediments can run into multi-millions of dollars. There is little doubt that cleaning up contaminated sediments is good for the environment. But is there also an economic benefit to the local area? If so, can it be quantified? The Northeast-Midwest Institute applied for and received a grant from the Great Lakes National Program Office to an-

swer just this question, choosing the Waukegan Harbor (Lake County), Illinois for a case-study. The Institute worked in collaboration with economists from the University of Illinois at Urbana-Champaign and San Francisco State University to perform the actual economic study.

Waukegan Harbor became notorious in the mid-1970's when sediments with some of the worst PCB (polychlorinated biphenyls) contamination in the nation were discovered there. Following many years of legal proceedings and studies, a \$20-25 million cleanup was conducted in the early 1990's. The cleanup greatly reduced PCB levels in the harbor, but further cleanup is planned to complete the restoration of full use of the harbor and de-listing of this Great Lakes Area of Concern.

The Northeast-Midwest Institute unveiled the results of the economic study to the public on September 22nd at the College of Lake County in Waukegan, Illinois. Dr. John Braden of the University of Illinois presented the findings of how Lake County homeowners can benefit from the cleanup of Waukegan Harbor. Dr. Braden estimated that Waukegan residential property values could increase by more than \$250 million if the harbor undergoes a complete cleanup.

There was a great deal of interest in the study findings: approximately 60-80 people attended the forum. Other speakers at the forum were Mayor Richard Hyde of the City of Waukegan; Congressman Mark Kirk (R-10th/IL), Great Lakes National Program Manager and USEPA Region 5 Regional

Administrator Tom Skinner; Illinois EPA Associate Director Ron Burke; Susie Schreiber, Director of the Waukegan Harbor Citizens Advisory Group; Chairperson Rosa Reyes-Prosen of the College of Lake County Board of Trustees and the Latino Coalition; and Nicole Mays and Richard Munson of the Northeast-Midwest Institute.

You can read a summary of the findings on the Northeast-Midwest Institute's Web Site at: <http://www.nemw.org/greatlakes.htm#waukegan>

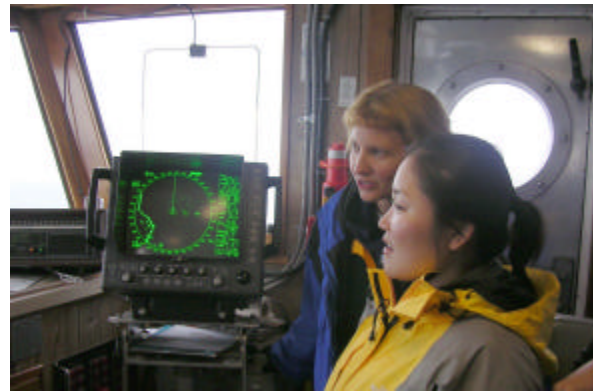
To learn more about the Waukegan Harbor Area of Concern and the status of cleanup activities, go to: <http://www.epa.gov/glnpo/aoc/waukegan.html>.

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A Great Education

The Great Lakes National Program Office's 180-foot research ship, the *R/V Lake Guardian* hosted two educational courses and a seminar on limnology (study of lakes) this Summer. Students included undergraduate and graduate students majoring in science and/or education. The courses were intended to give students an appreciation for the both the vastness of the resource that is the Great Lakes as well as the fragility of that resource as it is impacted by toxic chemicals and invasive species. The ultimate goal of these classes was to pass on what the students learned to others as the students use and use this knowledge in their technical careers or share it with their students and the Great Lakes community. In addition to the classroom lectures and films, students got to take a hand in collecting samples using the wide array of the *Lake Guardian's* monitoring equipment and then to analyze the samples in the ship's laboratories.

The first course was held in Lake Erie and



Students learn how the *Lake Guardian* uses radar and GPS to navigate the Great Lakes and position itself for taking environmental samples

Lake Ontario in late-July. The course was organized by Niagara University with instructors from the Great Lakes National Program Office, Niagara University, the U. S. Fish and Wildlife Service, and the New York Sea Grant office. A total of 14 graduate and undergraduate students in education from Niagara University and the University of Buffalo had classes in a wide range of subjects including the geology of the Great Lakes (taught on a field visit to the Niagara River Gorge), invasive species and shipping (while transiting the Welland Canal between Lakes Erie and Ontario), air and water monitoring, sampling fish populations using electro-shocking and trawl nets, current research on the Lower Lakes and the St. Lawrence River, dunes ecology, getting involved in Great Lakes issues through non-governmental organizations, lake and areas of concern restoration plans. Students are developing lesson plans from what they learned in the class to share with other educators.

The second limnology course was held in mid-September in Lake Ontario. Clarkson University was in charge of this course, and instructors were drawn from the Great Lakes National Program Office, USEPA



Students analyze water samples in the *Lake Guardian's* wet lab

Region 2, Clarkson University, the University of Tennessee, and Bowling Green State University. A total of seven undergraduate and graduate students took part, including one from Brazil and one from Canada. As the *Lake Guardian* sailed from Kingston, Ontario on the East end of Lake Ontario to Toronto and Niagara on the West end, lectures and field exercises covered included basic limnology, ecological principles, bacteria and viruses, ornithology (surveying bird populations), the Lake Ontario lower food web, and phosphorus and eutrophication. The classes were conducted in tandem with the USEPA Region 2 LOLA (Lake Ontario Lower Food Web) Study, so students also had a chance to see real Great Lakes research and monitoring.

The educational seminar was held on Lake Michigan. It was organized by Loyola University - Chicago, and included instructors from the Great Lakes National Program Office, Loyola University - Chicago, and the U.S. Fish and Wildlife Service. The student body was comprised of 5 undergraduate students, 2 graduate students, and a recent Master's in Biology graduate. Two of the students were education majors who would be able to use what they learned in developing lessons for their classrooms. Students gained first-hand knowledge of

how biological, sediment, and water monitoring are conducted and learned how the data are interpreted to understand the ecology of the Great Lakes.

Feedback from both the students and instructors was unabashedly positive, with several students remarking that this class was the best experience they had in 4 years of college, and many words of praise for the professionalism and helpfulness of the *Lake Guardian* crew and Great Lakes National Program Office scientists.

Proposals for educational courses aboard the *Lake Guardian* in 2004 are being solicited now (deadline for applications is December 12th). For further information on this request for proposals go to: <http://www.epa.gov/glupo/fund/rfp/guardian2004.html>.

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Toxics from Afar

A two-day workshop on Long Range Transport of persistent bioaccumulative toxic substances was held in Ann Arbor on September 16th and 17th. The event was co-sponsored by USEPA and Environment Canada, with the support of the Commission for Environmental Cooperation, the International Joint Commission, and the Delta Institute. The workshop was organized in response to a challenge within the Great Lakes Binational Toxics Strategy to evaluate the contribution and significance of long-range transport of toxic substances from worldwide sources to the Great Lakes. Drawing on both a commissioned background paper and over 70 experts from around the world, the workshop reviewed



Long Range Transport Workshop logo

the latest research on the global fate and cycling of persistent bioaccumulative toxics, or PBTs, identified critical knowledge gaps, and provided recommendations on future activities necessary to adequately address long-range transport.

Some of the most significant findings from the workshop include:

- the need to harmonize monitoring networks sampling intervals and methods,
- the urgency to establish sentinel sites to assess the trans-Pacific transport of PBTs,
- the utility of passive air samplers as an inexpensive method for assessing POPs in source regions,
- the importance of model inter-comparison studies for improving the reliability of model results, and
- the use of newly available models to assess the long-range transport potential of substances to the Great Lakes.

The workshop participants are currently in the process of drafting an “Ann Arbor Statement.” This Statement is intended to be a comprehensive, compelling, and unambiguous declaration of a set of actions required to expand our understanding of long-range transport and PBTs in the Great Lakes region.

The commissioned background paper, the

workshop’s program, the workshop presentations, and the draft Ann Arbor Statement are available on the Web at: <http://www.delta-institute.org/lrtworkshop/open.html>

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Another Look at Saginaw

Approximately 175,000 cubic yards of PCB-contaminated sediments were removed from the Saginaw River in 2000 and 2001 as part of an Natural Resource Damage settlement. In an effort to document the success of this effort in meeting the cleanup objectives, the *R/V Mudpuppy* was in its home port of Bay City, Michigan to assist the Michigan Department of Environmental Quality (MDEQ) to sample the Saginaw River. On September 2nd and 3rd, the MDEQ and GLNPO collected approximately 15 sediment cores from the river. MDEQ's state lab is conducting the analysis of the samples, and results should be available in November 2003.

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Dredging contaminated sediments from the Saginaw River
(photo courtesy of U.S. Fish and Wildlife Service)

Come to Greenacres



White Asters

Come learn how to landscape with beautiful native plants. Because native plants are acclimated to their local environment, they need minimal care, minimal irrigation, fertilization, and are resistant to insects. At the same time, they provide wildlife habitat and help preserve the area's natural history.

The Green Landscaping with Native Plants web site (www.epa.gov/greenacres/), "Greenacres" for short, is one of the most-visited parts of the Great Lakes National Program Office's Web Site. has been redesigned to facilitate ease of use. This very popular web site is looked to as a resource by the public and professionals alike. In September 2003, the site had over 41,000 hits. Usage has been as high as 60,000 hits in a month.

Come see what all the excitement is about, come to Greenacres and stay awhile.

(Danielle Green, green.danielle@epa.gov, 312-886-7594)

Mudpuppy Joins Celebration

On September 26th and 27th, the Great Lakes National Program Office's sediment-sampling boat, the *R/V Mudpuppy*, was in the Lake Erie Metro Park to join in the celebration of the U.S. Fish and Wildlife Ser-

vice's 100th anniversary of the National Wildlife Refuge System. The Detroit International Wildlife Refuge is one of the few wildlife refuges sited in an urban area. The purpose of the celebration was to educate the urban population on the importance of conservation, and the need to preserve our remaining wildlife areas in urban areas.

Several thousand people (including many business leaders from Detroit companies, as well as hunters, fishers, photographers, bird-watchers, conservationists, and families) attended the centennial celebration. Activities included everything from bird walks to hunting dog demonstrations to a Native American invocation. Among the VIPs at the celebration were Department of Interior Secretary Gale Norton, Congressman John Dingell (D-15th/MI); Bill Hartwig, Director of the Wildlife Refuge System for US Fish and Wildlife Service; Wayne County Executive Robert Ficano and Canadian dignitaries.

GLNPO's Rose Ellison and USEPA Region 5's Laura Lodisio conducted an environmental education activity with eight groups of area students as part of the "Kids in the Field Day" activity. The *Mudpuppy's* crew handed out brochures and answered ques-



Polly and Joe Bonem of Cetacean Marine, Inc. and GLNPO's Rose Ellison prepare to answer visitors' questions about the *Mudpuppy* (Cetacean Marine, Inc. provides the operating crew for the *Mudpuppy* under contract to GLNPO)



A lesser scaup, one kind of diving duck that spends part of its migration each year in the Detroit River International Wildlife Refuge
(photo courtesy of U.S. Fish and Wildlife Service)

tions about the 32-foot vessel that's specially outfitted to take sediment samples in Great Lakes rivers and harbors. The *Mudpuppy* has been used extensively for characterizing the sediments in the Great Lakes Areas of Concern.

For more information about the *Mudpuppy*, see: <http://www.epa.gov/glnpo/sediment/mudwork/mudpup.html>.

To learn about the Great Lakes Areas of Concern, go to: <http://www.epa.gov/glnpo/aoc/index.html>.

To learn more about the National Wildlife Refuge System, surf over to: <http://refuges.fws.gov/>.

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We welcome your questions, comments or suggestions about this month's Significant Activities Report. To be added to or removed from the Email distribution of the Significant Activities Report, please contact Tony Kizlauskas, 312-353-8773, kizlauskas.anthony@epa.gov.